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The Commissioner for Patents  
United States Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

**ATTN: Mail Stop Patent Application**

Re: U.S. Utility Patent Application  
Appl. No. 10/776,146; Filed 2/10/2004  
For: **Optical Waveguide Grating Coupler With Varying Scatter Cross Sections**  
Inventor(s): **Gunn III, et al.**  
Docket No.: **LUX-P020**

Sir:

The following documents are forwarded herewith for action by the U.S. Patent and Trademark Office:

1. Information Disclosure Statement;
2. Form PTO/SB/08A
3. Form PTO/SB/08B with 9 reference(s); and
4. A return post card.

It is respectfully requested that the attached postcard be stamped with the receipt date of the above documents and returned to the addressee as soon as possible.

2/24/04  
Date

Respectfully submitted,

[Signature]  
DENNIS S. FERNANDEZ, ESQ  
Reg. No. 34,160

**CUSTOMER NO: 22877**  
**FERNANDEZ & ASSOCIATES, LLP**  
**PATENT ATTORNEYS**  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): **Gunn III, et al.**

Docket No.: **LUX-P020**

Serial No.: **10/776,146**

Group Art Unit: (Not yet assigned)

Filed: **2/10/2004**

Examiner: (Not yet assigned)

Title: **Optical Waveguide Grating Coupler With Varying Scatter Cross Sections**

**INFORMATION DISCLOSURE STATEMENT**

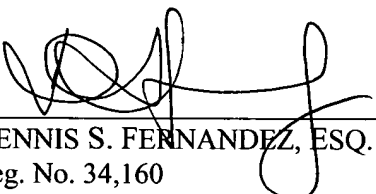
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Sir:

In keeping with the duty of candor and good faith owed to the Patent and Trademark Office, Applicants wish to bring the enclosed printed publications and U.S. patent references to the attention of the Examiner.

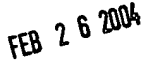
Applicant respectfully submits that Applicants' claimed invention is patentable over such references. Forms PTO/SB/08A and PTO/SB/08B listing these references are attached. It is understood the Office may find additionally relevant material in these or other references

Respectfully submitted,

  
DENNIS S. FERNANDEZ, ESQ.  
Reg. No. 34,160

\_\_\_\_\_  
Date

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**Complete if Known**

|                        |                  |
|------------------------|------------------|
| Application Number     | 10/776,146       |
| Filing Date            | 2/10/2004        |
| First Named Inventor   | Gunn III, et al  |
| Art Unit               | Not Yet Assigned |
| Examiner Name          | "                |
| Attorney Docket Number | LUX-Poso         |

## U. S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

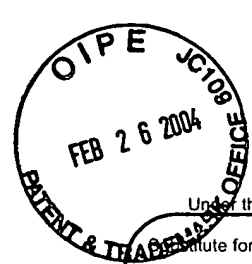
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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|   |   |    |   | Application Number       | 10/ 776, 146     |
|   |   |    |   | Filing Date              | 2/10/2004        |
|   |   |    |   | First Named Inventor     | Gunn III, et al  |
|   |   |    |   | Art Unit                 | Not yet Assigned |
|   |   |    |   | Examiner Name            | ~                |
| Sheet   | 2 | of | 2 | Attorney Docket Number   | Lux - P020       |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|                                 | 1                     | "LOW LOSS NANOPHOTONIC WAVEGUIDES AND RING RESONATORS IN SILICON-ON-INSULATOR"; BEATS, ET AL  |                |
|                                 | 2                     | "LARGE-SCALE PRODUCTION TECHNIQUES FOR PHOTONIC NANOSTRUCTURES"; BOGAERTS, ET AL  |                |
|                                 | 3                     | "CMOS-COMPATIBLE PLANAR SILICON WAVEGUIDE-GRATING-COUPLER PHOTODETECTORS FABRICATED ON SILICON-ON-INSULATOR (SOI) SUBSTRATES"; S.M. CSUTAK, S. DAKSHINA-MURTHY &  |                |
|                                 |                       | JOE C. CAMPBELL; IEEE JOURNAL OF QUANTUM ELECTRONICS, VOL.38 NO. 5 MAY 2002   |                |
|                                 | 4.                    | "BURIED-OXIDE SILICON-ON-INSULATOR STRUCTURES II: WAVEGUIDE GRATING COUPLERS"; EMMONS, ET AL; IEEE JOURNAL OF QUANTUM ELECTRONICS, VOL.28 NO. 1 JANUARY 1992.   |                |
|                                 | 5                     | "INTEGRATED OPTICS FOR OPTICAL HEAD APPLICATIONS"; OCHIAI ET AL; ELECTRONICS LETTERS 18TH AUGUST 1994 VOL. 30 NO. 17, PAGE 1403-1404  |                |
|                                 | 6                     | "EFFECTS OF GRATING HEIGHTS ON HIGHLY EFFICIENT UNIBOND SOI WAVEGUIDE GRATING COUPLERS"; ANG, ET AL; IEEE PHOTONICS TECHNOLOGY LETTERS VOL.12 NO. 1 JAN 2000  |                |
|                                 | 7                     | "MODE MATCHING TECHNIQUE FOR HIGHLY EFFICIENT COUPLING BETWEEN DIELECTRIC WAVEGUIDES AND PLANAR PHOTONIC CRYSTAL CIRCUITS"; SANCHIS, ET AL  |                |
|                                 | 8                     | "BURIED-OXIDE SILICON-ON-INSULATOR STRUCTURES II: WAVEGUIDE GRATING COUPLERS"; EMMONS, ET AL; IEEE JOURNAL OF QUANTUM ELECTRONICS, VOL 28 NO.1 JANUARY 1992   |                |
|                                 | 9                     | "NON UNIFORM GRATING COUPLERS FOR COUPLING OF GAUSSIAN BEAMS TO COMPACT WAVEGUIDES"; WEST, ET AL; PUBLISHED IN THE INTEGRATED PHOTONICS RESEARCH TECHNICAL DIGEST 1994  |                |

|                    |  |                 |  |
|--------------------|--|-----------------|--|
| Examiner Signature |  | Date Considered |  |
|--------------------|--|-----------------|--|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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